

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q86739

Pascal BRUNA

Appln. No.: 10/532,961

Group Art Unit: 3771

Confirmation No.: 9115

Examiner: Kristen Clarette MATTER

Filed: April 27, 2005

For: FLUID DISPENSER DEVICE WITH A DOSE INDICATOR

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

**Table of Contents**

I. REAL PARTY IN INTEREST.....	2
II. RELATED APPEALS AND INTERFERENCES .....	3
III. STATUS OF CLAIMS .....	4
IV. STATUS OF AMENDMENTS.....	6
V. SUMMARY OF THE CLAIMED SUBJECT MATTER.....	7
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL .....	9
VII. ARGUMENT.....	10
CLAIMS APPENDIX .....	18
EVIDENCE APPENDIX: .....	23
RELATED PROCEEDINGS APPENDIX.....	24

**I. REAL PARTY IN INTEREST**

The real party in interest in this appeal is VALOIS SAS (assignee), of France, by virtue of an assignment executed by Pascal BRUNA (inventor), of France, on February 14, 2005. The assignment was previously submitted and was recorded on March 13, 2006, at Reel 017330, Frame 0260.

**II. RELATED APPEALS AND INTERFERENCES**

To the knowledge and belief of Appellant, the Assignee, and the Appellant's legal representative, there are no other appeals or interferences before the Board of Appeals and Interferences that will directly affect or be affected by the Board's decision in the instant Appeal.

### **III. STATUS OF CLAIMS**

Claims 1-3 and 6-22 are pending in the present application and all claims are rejected. The rejection of claims 1-3 and 6-22 is being appealed.

The Advisory Action, dated April 1, 2009, and the Notice of Panel Decision from Pre-Appeal Brief Review, dated May 13, 2009, both indicate that only claims 1-3 and 6-21 (but not claim 22) are pending in the current application. Applicant notes that claim 22 was entered by right in Applicant's response under 37 C.F.R. § 1.111, filed on October 8, 2008, and has not been canceled. Further, during an interview on April 6, 2009, the Examiner indicated that the listing of only claims 1-3 and 6-21 as the only claims pending in the Advisory Action, dated April 1, 2009, was a typographical error. As such, claim 22 is pending in the current application and has not been canceled.

The rejections are summarized as follows:

Claims 6-9 are rejected under 35 U.S.C. § 112, second paragraph. The Examiner indicated that claim 6 depends from claim 5, a canceled claim. As noted below, this rejection has been addressed by the Amendment filed on March 23, 2009, which has been entered by the Examiner.

Claims 1-3 and 6-22 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).

Claims 1-3 and 6-20 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as allegedly being unpatentable over claims 1-8 of co-

pending Application No. 10/532,073. The provisional rejections on the ground of non-statutory obviousness-type double patenting are not at issue in this appeal. By not addressing the provisional rejections on the ground of non-statutory obviousness-type double patenting, Applicant makes no assertion regarding the merits of these rejections.

All of the claims pending in the appeal are set forth in their entirety in the Claims Appendix, attached to this Brief on Appeal.

**IV. STATUS OF AMENDMENTS**

A Final Rejection was mailed on November 21, 2008. Appellant submitted a Response under 37 C.F.R. § 1.116 on March 23, 2009, which amended the dependency of claim 6 from claim 5, a canceled claim, to independent claim 1. As such, the rejection of claims 6-9 under 35 U.S.C. § 112, second paragraph has been addressed by the amendment.

In the Advisory Action dated April 1, 2009, the Examiner indicated that the amendment will be entered for purposes of appeal.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claims 1-3 and 6-22 are directed toward a fluid dispenser comprising a dose indicator. Claims 1 and 13 are the only independent claims. Claims 2, 3, 6-12, & 21 depend from independent claim 1, and claims 14-20 and 22 depend from independent claim 13.

Regarding independent claim 1, this claim recites a fluid dispenser device comprising a body (1) incorporating a dispenser orifice (5), a reservoir (10) containing the fluid and a dispenser member (15) for selectively dispensing the fluid contained in the reservoir (10). (*See* current application, page 4, lines 5-20; FIGS. 1-3.) The fluid dispenser device further comprises a dose indicator comprising electronic display means (20), said display means (20) including a permanent display member (21) that does not require any energy in order to keep the display unchanged and requires only a small amount of energy in order to change said display. (*See* current application, page 4, line 30 to page 5, line 11.) Claim 1 recites that the indicator operates without a battery and the energy required to change the display is created while the device is being actuated during actuation of the fluid dispenser member. (*See* current application, page 5, lines 12-22; page 6, lines 11-22.)

Independent claim 13 recites a fluid dispenser device comprising a body comprising a dispenser orifice, a reservoir comprising a fluid, a dispenser member that selectively dispenses the fluid from the reservoir; and a dose indicator comprising an electronic display. (*See* current application, page 4, lines 5-29; FIGS. 1-3.) The display comprises a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display. (*See* current application, page 4, line 30 to page 5, line 11.) The electrical

energy required to change the display is generated during actuation of the fluid dispenser member by interaction between two physical portions of the device moving relative to each other. (See current application, page 5, lines 12-22.)

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The issues on appeal are summarized as follows:

1. Whether claims 1-3 and 6-22 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).

**VII. ARGUMENT**

**I. Claims 1-3 and 6-22 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).**

In rejecting claims 1-3 and 6-21 over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017), and further in view of Liou (US 5,895,159), the grounds of rejection state:

Regarding claims 1, 2, 3, 10, 12, 13-17, 21, and 22, Walker et al. discloses a fluid dispensing device comprising a body (12, 112) incorporating a dispenser orifice, a reservoir (13) containing the fluid, and a dispensing member (metering valve/stem of MD1), the device being further characterized in that it comprises a dose indicator with an LCD display means (column 7, lines 30-35) that displays the number of doses delivered to the patient (abstract). A switch controls the LCD screen such that upon actuation of the dispensing member by a user, two portions of the switch (135) contact each other and an electric pulse is sent to the counting device (130) to change the LCD display (column 7, lines 40-50).

Walker et al. is silent as to the display requiring no energy to keep the display unchanged and only a small amount of energy to change it. However, Barberi et al. discloses a bistable nematic liquid crystal display for use with small portable devices (see column 19, lines 50-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a bistable nematic LCD as taught by Barberi et al. in place of the LCD of Walker et al. in order to preserve power. The modified reference would require no energy to keep the display unchanged and only a small electric pulse to change it.

Furthermore, the modified Walker et al. reference does not disclose that the energy to change the display is created by the contacting portions of the switch to create the energy while the device is being actuated and that no battery is required to operate the device. However, Liou discloses a current producer (60) that produces an instantaneous current upon a pressing bar (31) striking an internal flint (column 2, lines 47-53) in order to avoid the use of an external power source (column 1, lines 45-55). Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to have replaced the battery and switch mechanism of the modified Walker et al. device with a pressing bar and flint current producer as taught by Liou in order to produce the electric pulse needed to change the LCD display without the need for an external power supply (i.e., by replacing the “striking bar” and “contacting portion” of Walker et al. seen in Figure 3B with the pressing bar and flint of Liou, respectively).

Regarding claim 11, the dose indicator disclosed by Walker et al. is thin in structure (see figure 2A).

Regarding claim 6, the electric producer of Liou transforms the mechanical movement of the striker pin into an electric pulse that would be used to change the display in the modified device.

Regarding claims 7 and 18, the interaction in the modified device would involve one portion of the device (pressing bar) striking against another portion (flint) of the device during actuation.

Regarding claims 8, 9, 19, and 20, the reservoir and striker pin are displaceable relative to the body (i.e., user presses top of reservoir/pin/pressing bar to actuate dispensing) and the contacting portion (flint) is located on the body and unable to move relative to the body (see Figures 3B and 3D). In addition, Walker et al. discloses a spring for biasing the striker pin away from the contacting portion (see figure 3D).

Office Action at pages 2-4.

### **Independent Claims 1 and 13**

Independent claim 1 states: “said display means (20) including a permanent display member (21) that does not require any energy in order to keep the display unchanged, and that requires only a small amount of energy in order to change said display; and wherein said indicator operates without a battery; and the energy required to change the display is created while the device is being actuated during actuation of the fluid dispenser member.”

Independent claim 13 states: “a dose indicator comprising an electronic display, the display comprising a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and wherein the electrical energy required to change the display is generated during actuation of the fluid dispenser member by interaction between two physical portions of the device moving relative to each other.”

The Examiner concedes that none of the applied three patents disclose the above features, but relies on a combination of these three patents to piece together the claimed subject matter. However, there is no reasonable rationale as to why it would be obvious to a person of ordinary skill to alter the references in the manner set forth in the grounds of rejection. In fact, the applied patents, taken individually or as a whole, teach away from the claimed invention. Moreover, even if such alterations were made, the skilled artisan would not arrive at the claimed invention.

**A. There is no rationale to combine the references as indicated by the Examiner.**

To establish an obviousness rejection, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, Applicant notes that “impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.” MPEP § 2142. In the current case, there is nothing in the prior art to provide a reasonable rationale as to why it would be obvious to a person of ordinary skill to combine Walker, Barberi, and Liou to produce all of the recited features of independent claim 1.

Walker discloses a Metered Dose Inhaler (MDI) with an electronic counter. This counter uses a conventional LCD display powered by a battery. (*See for example* Walker, col. 8, line 51 to col. 9, line 10.) The counter is actuated by closing an electronic microswitch connected to the battery. The closing of the microswitch is provided by contact: as long as contact is maintained, the switch and the electrical circuit are closed. When contact is removed, the switch and the electrical circuit are opened again. (*See* Walker col. 7, lines 36-52).

Barberi discloses bistable LCD devices having monostable anchorings. Electrical fields defined between electrodes are used to operate these devices. Barberi mentions that the display screens are used in portable devices, like mobile telephones, electronic organizers or diaries, as well as video applications. All these applications clearly require complex screens with multiple information display and require electrical power or energy to operate. Barberi explicitly states that in the above noted devices, the screen must be refreshed as infrequently as possible in order to preserve the power, indicating that the LCD of Barberi was attached to a power source such as a battery. (col. 19, l. 50-54).

Liou, on the other hand, discloses a heat-melting glue gun having a current-producer that creates a short-circuit spark to ignite gas jetting from a nozzle. (Liou, col. 2, lines 47-60.) The spark is created by striking a flint with a pressing bar, thus producing instantaneous electric current which is then directed towards electrodes provided near the nozzle. (*See* Liou, col. 2, lines 47-60.) Thus, Liou only indicates that the current producer is capable of igniting gas from a nozzle, which is entirely different than powering an LCD display. For one skilled in the art to have looked to Liou for a technical solution, that person, starting from Walker et al., would have

required some rationale, hint or motivation to search a document concerning glue guns. Nothing in Walker et al. indicates that the electric power supply is inadequate or should be replaced. As such, it would not have been obvious to one of ordinary skill in the art to combine Liou with either Walker or Barberi.

In view of the disclosures of Walker, Barberi, and Liou, as described above, there would be no rational reasoning for one to combine these references. In Walker, a switch is closed by closing an electric circuit powered by a battery. Barberi also discloses that the device disclosed in that reference is powered by a battery. Thus, even when considering the non-obvious combination of Walker and Barberi, these references would teach to one skilled in the art that it is necessary to provide an electric power supply to power the LCD screen by a battery or other stored energy source. Since both Walker and Barberi require that a battery source be provided to operate the respective devices, these references teach away from removing the battery as the energy source.

In contrast, in Liou, a spark is created by an impact of one element on another to ignite a gas to produce a flame. Nothing would indicate to one skilled in the art that the current producer in Liou would be suitable to power an LCD screen.

The Examiner further states that Walker and Liou both deal with dispensing devices that utilize an electric pulse sent/created by mechanically contacting two portions of the device. Again, this is not enough to lead the skilled person to look to the non-analogous Liou patent. In Walker et al., there is a switch that is closed, in the same way as when a light is switched on, by closing an electric circuit powered by a battery. In Liou, there is a spark that is created by an

impact of one element on another. For one skilled in the art to have looked to Liou for a technical solution, that person, starting from Walker et al., would have required some rationale, hint or motivation to search a document concerning glue guns. *See KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007). Further, nothing in Walker indicates that the electric power supply is inadequate or should be replaced. The Examiner's rejection is classic hindsight reconstruction based on Applicant's disclosure and not the prior art.

Thus, in view of the above, there would be no motivation or rational reasoning to combine Walker, Barberi and Liou.

**B. Even if the references are improperly combined, this still would not produce all of the recited features of independent claims 1 and 13.**

In the Advisory Action, dated April 1, 2009, the Examiner indicated that "Liou was cited merely to show that electrical pulses can be created without a battery by mechanical striking. . . . By replacing the contact portions of Walker with a pressing bar and flint piece as taught by Liou, the electrical pulse needed to change the display would in fact be created when a user presses down on the reservoir to dispense a metered dose of medicament." (Office Action at page 6.)

Claim 1, however, recites "the energy required to change the display is created while the device is being actuated during actuation of the fluid dispenser member;" and claim 13 recites "wherein the electrical energy required to change the display is generated during actuation of the fluid dispenser member by interaction between two physical portions of the device moving relative to each other." Neither Walker nor Liou disclose a device where the energy is created or generated during actuation of the device.

As noted above, the energy for the LCD in Walker is stored in a battery, and the actuation of the device in Walker merely closes a circuit to supply current from the battery. The actuation of the device in Walker, however, does not create or generate the energy used to power the LCD.

Liou discloses a trigger of the glue feeding means 50 and a pressing bar 31 of the current producer 60 as separate elements. Thus, in Liou, there is a specific energy creating system that is separate from the glue dispensing system. The user would have to provide two different actions: pressing the bar to create a spark to ignite the gas, and pressing the trigger to feed the glue.

Thus, none of the references disclose a device where the energy is created or generated during actuation of the device. Accordingly, even if, for the sake of argument, one were to combine Walker with Barberi and Liou, the result would be the Walker device having a current-producer as described in Liou, requiring a separate actuation to create the energy.

#### **Dependent Claims**

Claims 2, 3, 6-12, and 21 depend from independent claim 1. Claims 14-20 and 22 depend from independent claim 13. Applicant submits that claims 2, 3, 6-12, and 14-22 are allowable at least by virtue of their respective dependencies from independent claims 1 or 13.

#### **Dependent Claims 6, 8, 14, 19, 21, 22**

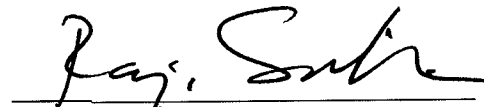
Dependent claims 6, 8, 14, 19, 21, and 22 all claim related subject matter in that the electrical energy required to change the display is generated or created during actuation of the device. As noted above, none of the cited references disclose a device where electrical energy is created or generated while the device is being actuated. In both Walker and Barberi, electrical energy is stored in a battery, and therefore, is not created or generated during actuation. In Liou,

a trigger of the glue feeding means 50 and a pressing bar 31 of the current producer 60 are separate elements. As such, the spark created by the pressing bar 31 is not created during actuation of the glue gun. Therefore, even if one were to combine the references as alleged by the Examiner, it still would not produce all of the features as recited in dependent claims 6, 8, 14, 19, 21, and 22.

**CONCLUSION**

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: July 21, 2009

**CLAIMS APPENDIX**

CLAIMS 1-3 and 6-22 ON APPEAL:

1. A fluid dispenser device comprising: a body (1) incorporating a dispenser orifice (5); a reservoir (10) containing the fluid; and a dispenser member (15) for selectively dispensing the fluid contained in the reservoir (10), the device being characterized in that it further comprises a dose indicator comprising electronic display means (20), said display means (20) including a permanent display member (21) that does not require any energy in order to keep the display unchanged, and that requires only a small amount of energy in order to change said display; and wherein said indicator operates without a battery; and the energy required to change the display is created while the device is being actuated during actuation of the fluid dispenser member.

2. A device according to claim 1, in which the display member (21) is of the liquid crystal display (LCD) type.

3. A device according to claim 1, in which the display member (21) includes bistable nematic crystals.

4. (canceled).

5. (canceled).

6. A device according to claim 1, in which an interaction between two portions (10, 11; 1, 2) of the device moving relative to each other while the device is being actuated, is transformed by an electromechanical converter into an electric pulse used to change the display.

7. A device according to claim 6, in which said interaction involves one portion (10, 11) of the device rubbing or striking against another portion (1, 2) of the device during actuation.

8. A device according to claim 7, in which the reservoir (10) is displaceable relative to the body (1) of the device during actuation, said body (1) including a contactor (2) co-operating with said reservoir (10), the interaction between said reservoir (10) and said contactor (2) creating the electric pulse required to change the display.

9. A device according to claim 7, in which a striker pin (11) is displaced against a contactor (2) while the device is being actuated, said contactor (2) being unable to move relative to said body (1), and said striker pin (11) co-operating with a spring (12).

10. A device according to claim 1, in which said dose indicator indicates the number of doses of fluid that have been dispensed or that remain to be dispensed from the reservoir.

11. A dispenser according to claim 1, in which said dose indicator is thin in structure so

that it is adaptable to a fluid dispenser device without having to modify the outside dimensions thereof.

12. The dispenser according to claim 1, wherein the dispenser member is a metering valve or pump.

13. A fluid dispenser device comprising:  
a body comprising a dispenser orifice;  
a reservoir comprising a fluid; and  
a dispenser member that selectively dispenses the fluid from the reservoir; and  
a dose indicator comprising an electronic display, the display comprising a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and  
wherein the electrical energy required to change the display is generated during actuation of the fluid dispenser member by interaction between two physical portions of the device moving relative to each other.

14. The device according to claim 13, wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other while the device is being actuated.

15. The device according to claim 13, wherein the electrical energy required to change the display is generated without a battery.

16. The device according to claim 13, wherein the display is a liquid crystal display (LCD).

17. The device according to claim 13, wherein the display comprises bistable nematic crystals.

18. The device according to claim 13, wherein the interaction between two physical portions of the device moving relative to each other involves one portion of the device rubbing or striking against another portion of the device during actuation.

19. The device according to claim 13, wherein the reservoir is displaceable relative to the body of the device during actuation, the body comprising a contactor co-operating with the reservoir, the interaction between the reservoir and the contactor generating the electric energy required to change the display.

20. The device according to claim 13, comprising a striker pin and a contactor, wherein the striker pin is displaced against the contactor while the device is actuated, the contactor unable to move relative to the body and said striker pin co-operating with a spring.

21. The device according to claim 1, wherein the energy required to change the display is created during dispensing of the fluid by the dispenser member.

22. The device according to claim 13, wherein the electrical energy required to change the display is generated during dispensing of the fluid by the dispenser member.

**EVIDENCE APPENDIX:**

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

No evidence has been submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132.

**RELATED PROCEEDINGS APPENDIX**

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified about in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

There are no related proceedings.

**PATENT APPLICATION**

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**SUBMISSION OF APPEAL BRIEF**

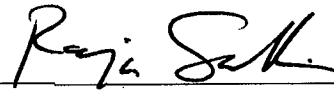
**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. The USPTO is directed and authorized to charge the statutory fee of \$540.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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